

REMARKS

Reconsideration and continued examination of this application are respectfully requested. Claims 1-23 are pending and have been examined.

Rejection of Claims 1-23 Under 35 U.S.C. §102(e) over Jadwin et al.

Claims 1-23 are rejected under 35 U.S.C. § 102(e) over Jadwin et al. (U.S. Patent No. 6,766,136 B2). The Patent Office asserts that Jadwin et al. teaches a development system and method for developing using a supply of dry developer mixture that contains magnetic toner particles and hard magnetic carrier particles along with a non-magnetic-cylindrical shell for transporting the developer from the supply to a development zone. The Patent Office further asserts that the shell is rotatable or stationary and includes a rotating magnetic core of a pre-selected magnetic field strength and means for rotating the magnetic core to provide for the transport of toner particles from the shell to an electrostatic image. The Patent Office further asserts that surface treatment agents for the toner are also shown. For the following reasons, this rejection is respectfully traversed.

Claim 1 of the present application relates to a development system for toner and includes a supply of dry developer mixture comprising chemically prepared toner particles and hard magnetic carrier particles; a non-magnetic, cylindrical shell for transporting said developer from said supply to a development zone, wherein said shell is rotatable or stationary; a rotating magnetic core of a pre-selected magnetic field strength; and means for rotating at least said magnetic core to provide for the transport of said toner particles from said shell to an electrostatic image. Claim 7 relates to a method for developing an image with a chemically prepared toner particle.

In reviewing Jadwin et al., there appears to be no teaching or suggestion of the development systems or methods of Jadwin et al. using chemically prepared toner particles as defined in the present application. Further, from a review of the reasons for this rejection, there appears to be no recognition or mention of Jadwin et al. showing chemically prepared toner particles. As explained at page 5, lines 9-15, of the present application, chemically prepared toner is a toner which is not prepared by grinding bulk polymer materials to a suitable particle size and/or particle size distribution. Chemically prepared toners

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are prepared by a chemical process wherein the polymers or toner resin, which form the majority of the toner particles, is formed by a polymerization process such as an emulsion and/or a suspension polymerization technique. These techniques form the polymeric powder in a suitable particle size and/or particle size distribution without any need for grinding. From a review of Jadwin et al., there appears to be no use or even suggestion of using chemically prepared toners. In particular, at column 9, lines 12-20, Jadwin et al. shows the extruding of a melt compounded mixture to form the toner particles which are chopped or ground to the desired particle size.

With respect to the claimed development system and method for developing claimed in the present application, prior to Applicants' invention, there was a belief that chemically prepared toners would be no different from ground toners with respect to properties exhibited by such development systems. However, to the surprise of the inventors, using chemically prepared toners has numerous advantages over conventional ground toners, including reducing significantly dusting problems during development operations. As demonstrated in the Examples set forth in the application at page 17, line 21, through page 18, line 3, The present inventors discovered that the build up of fine toner from chemically prepared toners during the development operation did not create any dusting problems during development operations, unlike similar development operations using ground toners. Furthermore, the charge stability over time with the development systems of the present invention is considerably improved and stable over many hours of operation, such as over 100 hours, as demonstrated in the application at page 18, line 25, through page 19, line 9. The charge stability was quite consistent for the chemically prepared toner compared to ground toner which is an unexpected result and a desired benefit with respect to the claimed development system and method. As shown in the examples of the application, the advantages of the claimed invention are significant when compared to ground toner. Accordingly, for at least these reasons, this rejection should be withdrawn.

Rejection of Claims 1-23 Under 35 U.S.C. § 102(e) over Fields et al.

At the bottom of page 2 of the Office Action, the Patent Office rejects claims 1-23 under 35 U.S.C. § 102(e) as being anticipated by Fields et al. (U.S.

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Patent No. 6,797,448 B2). The Patent Office asserts that Fields et al. shows a development system and method for developing for the same reasons as provided by the Patent Office with respect to the § 102(e) rejection applying Jadwin et al. For the following reasons, this rejection is respectfully traversed.

Fields et al. relates to development systems and methods for developing using ground toner. Fields et al. does not teach or suggest using chemically prepared toners, as explained above with respect to Jadwin et al. Fields et al. describes at column 12, lines 15-30, the extruding of a melt of ingredients which eventually are chopped and ground to desired sizes. The differences described above with regard to Jadwin et al. apply equally to the rejection over Fields et al., and the above comments with respect to Jadwin et al. are incorporated herein. For at least these reasons, this rejection should also be withdrawn.

Rejection of Claims 1-23 Under 35 U.S.C. §103(a) over Fritz et al. in view of Fields et al., Asanae et al., and Young et al.

At page 3 of the Office Action, the Patent Office rejects claims 1-23 under 35 U.S.C. §103(a) as being unpatentable over Fritz et al. (U.S. Patent No. 4,473,029), in view of Fields et al. (U.S. Patent No. 6,200,722 B1), Asanae et al. (U.S. Patent No. 5,731,121), and Young et al. (U.S. Patent No. 5,489,497). The Patent Office asserts that Fritz et al. discloses a development system and method for developing essentially having the same components as described above with respect to Jadwin et al. or Fields et al. The Patent Office further asserts that although Fritz et al. does not specifically teach surface treatment agents, Fritz et al. suggests that the toner may contain well known art recognized additives. The Patent Office relies on Fields et al., Asanae et al., and Young et al. to show surface treatment agents for toner. The Patent Office asserts it would be obvious to one of ordinary skill in the art to use well known surface treatment agents taught by the secondary references in the toner of Fritz et al. For the following reasons, this rejection is respectfully traversed.

Each of the references relied upon by the Patent Office in this rejection do not teach or suggest the use of chemically prepared toner in a development system or method for developing as claimed by Applicants. The Patent Office does not indicate that any of the references relied upon teach or suggest development systems or methods for developing electrostatic images using

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chemically prepared toner particles as claimed by Applicants. The primary reference of Fritz et al. discloses that the various components of the toner are heated, milled, and then crushed and finely ground. *See* column 13, lines 12-16 of Fritz et al. The secondary references similarly do not disclose or suggest the particular development system and method for developing claimed by Applicants. As stated above with respect to the rejection over Jadwin et al., the examples of the application show the unexpected and superior advantages of using chemically prepared toner in the claimed development system and method for developing. These advantages are numerous compared to ground toners and would not be obvious to one skilled in the art. The applied references do not disclose or suggest the use of chemically prepared toners in development systems or methods for developing, and therefore do not disclose or suggest the advantages achieved by use of such chemically prepared toners. For at least these reasons, this rejection should be withdrawn.

In view of the foregoing remarks, Applicants respectfully request reconsideration of this application and timely allowance of all pending claims 1-23.

Should the Examiner require anything further, or have any questions, the Examiner is asked to contact Applicants' undersigned representative.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.